



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,304	12/15/2000	William J. Labarge	DP-302483	1703

7590 09/27/2004

Vincent A. Cichosz  
DELPHI TECHNOLOGIES, INC.  
1450 West Long Lake  
Troy, MI 48007

EXAMINER

TRAN, HIEN THI

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/737,304		LABARGE ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Hien Tran		1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 18-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-37 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/28/01, 6/19/02, 2/2/04</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of group I, claims 1-17 in the reply filed on 7/12/04 is acknowledged.

2. Claims 18-37 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/12/04.

### *Drawings*

3. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

### *Specification*

4. The disclosure is objected to because of the following informalities:

On page 6, line 11 --as-- should be inserted after "such".

It is unclear as to how the organometallic precursor layer is structurally related to other layers, it appears that the organometallic precursor is decomposed after applied on the substrate. The final product has no organometallic precursor at all.

Appropriate correction is required.

5. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Objections***

6. Claim 6 is objected to because of the following informalities:

In claim 6, line 3 --isopropoxides-- is misspelled.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, in claim 1, it is unclear as to what the limitation of "a layer of an organometallic precursor disposed on said substrate material" is implied, how the organometallic precursor layer is structurally related to other layers since the final catalyst substrate has no organometallic precursor layer at all. Note that the organometallic precursor is decomposed after applied on the substrate as set forth on page 7, lines 19-21 and page 27. See claims 15-17 likewise.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1764

10. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 5-6 it is unclear as to how the organometallic precursor layer is structurally related to other layers and where it is shown in the drawings. See claims 15-17 likewise.

In claim 4, line 2 it is unclear as to what is intended by "further comprise".

In claim 5, line 2 it is unclear as to what is intended by "further comprises; in line 3 it is unclear as to how the catalyst material is related to the catalyst set forth in claim 1 and where the catalyst material and the catalyst are disclosed in the specification.

In claim 9, line 2 it is unclear as to what is intended by "further comprises". See claim 10 likewise.

In claim 16, line 2 "said first layer" has no clear antecedent basis.

In claim 17, it is unclear as to how it is related to the other layers set forth in claim 1.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1764

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

14. Claims 1-10, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/00272 in view of Muller et al (5,911,966), Clark et al (4,921,731) and WO 97/47380.

WO 00/00272 discloses a catalyst substrate comprising: a substrate material comprising a catalyst; and a layer of an adsorption material disposed on said substrate.

Since it is unclear as to what structural limitation applicants are attempting to recite as set forth above, as best understood, the apparatus of WO 00/00272 is substantially the same as that of the instant claims, but fails to disclose whether a layer of an organometallic precursor may be disposed on said substrate material.

However, Muller et al, Clark et al and WO 97/47380 disclose the conventionality of providing a layer of an organometallic material on said substrate material.

It would have been obvious to one having ordinary skill in the art to use an organometallic material as taught by Muller et al, Clark et al and WO 97/47380 in the apparatus of WO 00/00272 so as to enhance the adsorption/catalytic activity of the system thereof.

Selecting an appropriate type of organometallic material is within the purview of one having ordinary skill in the art during routine experimentation and optimization of the system, based on the teachings of Muller et al, Clark et al and WO 97/47380, absence showing any unexpected results thereof.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide more than one layer, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

15. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/00272 in view of Muller et al (5,911,966), Clark et al (4,921,731) and WO 97/47380 as applied to claims 1-10, 15-17 above and further in view of Kharas (5,980,844).

The modified apparatus of WO 00/00272 is substantially the same as that of the instant claims, but fails to disclose the specific size for the catalyst particles.

However, Kharas discloses the conventionality of providing catalyst particles having size within the instant range.

It would have been obvious to one having ordinary skill in the art to select an appropriate size for the catalyst particles, such as the size taught by Kharas in the modified

Art Unit: 1764

apparatus of WO 00/00272, on the basis of its suitability for the intended use as a matter of obvious design choice to obtain the desired purification thereof, absence showing any unexpected results, and since discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Note that it has held that when the only difference between the prior art device and the claim was a recitation of relative size, and the device with the relative size would not perform differently than the prior art device, the claimed device was not patentable distinct.

***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HT  
September 23, 2004

*Hien Tran*  
**Hien Tran**  
**Primary Examiner**  
**Art Unit 1764**